

Docket No.: TJSU00014-100  
Serial No. 09/820,215

PATENT  
Filed: March 27, 2001

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**In the Claims:**

Please amend claims 1 and 4 and cancel claim 3 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of detecting the presence of a disseminated epithelial cell marker in a sample comprising the steps of
  - a) eliminating CD34+ cells from the sample using an anti-CD34 antibody based affinity process; and
  - b) detecting the presence of mRNA that encodes the marker; wherein the marker is a differentiation specific antigen;  
wherein said detection of said mRNA indicates the presence of a disseminated epithelial cell marker.
- 2-3. (Canceled)
4. (Currently Amended) A method of detecting the presence of a disseminated epithelial cell marker in a sample comprising the steps of
  - a) eliminating CD34+ cells from the sample ~~to reduce false positives~~ using an anti-CD34 antibody based affinity process; and
  - b) detecting the presence of mRNA that encodes the marker; wherein the marker is a differentiation specific antigen;  
wherein the disseminated epithelial cell marker is selected from the group consisting of guanylyl cyclase C, Cdx-1, Cdx-1, Cdx-2, sucrase isomaltase, lactase, carbonic anhydrase, prostate specific antigen, prostate specific membrane antigen, cytokeratin 18, cytokeratin 19, cytokeratin 20, ErbB2, Erb-B3, epithelial mucin-1, epithelial mucin-18, gastrointestinal tumor associated antigen 733.2, desmoplakin I, epithelial glycoprotein 40, tyrosinase, thyroglobulin, tyrosine hydroxylase, and neuron-specific glycoprotein

**Docket No.: TJU00014-100**  
**Serial No. 09/820,215**

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wherein said detection of said mRNA indicates the presence of a disseminated epithelial cell marker.

5. (Canceled)
6. (Previously Presented) The method of claim 1, wherein the CD34+ cells are removed by column chromatography.
7. (Original) The method of claim 1, wherein the sample is tissue or bodily fluid.
8. (Original) The method of claim 1, wherein the sample is selected from the group consisting of blood, lymph tissue, and bone marrow.
9. (Original) The method of claim 1, wherein the mRNA is detected a polymerase chain reaction (PCR)-based method.
10. (Original) The method of claim 1, wherein the mRNA is detected by reverse transcriptase (RT)-PCR.
11. (Original) The method of claim 1, wherein the mRNA is detected by nested RT-PCR.
12. (Canceled)
13. (Previously Presented) The method of claim 1, wherein the marker is selected from the group consisting of guanylyl cyclase-C (GC-C), prostate-specific antigen (PSA), prostate-specific membrane antigen (PSM), cytokeratin-19 (CK-19), cytokeratin-20 (CK-20), mucin 1 (MUC-1), and gastrointestinal-associated antigen (GA733.2).

**Docket No.: TJU00014-100**  
**Serial No. 09/820,215**

**PATENT**  
**Filed: March 27, 2001**

14. (Original) The method of claim 1, wherein the marker is GC-C.

15. (Previously Presented) The method of claim 1, wherein the disseminated epithelial cell marker is a cell marker for a metastatic colon cancer cell.

Claims 16-36 (Canceled)

37. (Previously Presented) The method of claim 1 wherein the sample is mononuclear cells isolated from blood.

38. (Previously Presented) The method of claim 37, wherein the disseminated epithelial cell marker is a tissue-specific marker.

39. (Previously Presented) The method of claim 38, wherein the tissue is selected from the group consisting of colon, lung, prostate, testis, breast, liver, and skin.

40. (Previously Presented) The method of claim 37, wherein the disseminated epithelial cell marker is selected from the group consisting of guanylyl cyclase C, Cdx-1, Cdx-1, Cdx-2, sucrase isomaltase, lactase, carbonic anhydrase, prostate specific antigen, prostate specific membrane antigen, cytokeratin 18, cytokeratin 19, cytokeratin 20, ErbB2, Erb-B3, epithelial mucin-1, epithelial mucin-18, gastrointestinal tumor associated antigen 733.2, desmoplakin I, epithelial glycoprotein 40, tyrosinase, thyroglobulin, tyrosine hydroxylase, and neuron-specific glycoprotein.

41. (Previously Presented) The method of claim 37, wherein the CD34+ cells are removed by column chromatography.

42. (Previously Presented) The method of claim 37, wherein the mRNA is detected a polymerase chain reaction (PCR)-based method.

**Docket No.: TJU00014-100**  
**Serial No. 09/820,215**

**PATENT**  
**Filed: March 27, 2001**

43. (Previously Presented) The method of claim 37, wherein the mRNA is detected by reverse transcriptase (RT)-PCR.

44. (Previously Presented) The method of claim 37, wherein the mRNA is detected by nested RT-PCR.

45. (Previously Presented) The method of claim 37, wherein the marker is selected from the group consisting of guanylyl cyclase-C (GC-C), prostate-specific antigen (PSA), prostate-specific membrane antigen (PSM), cytokeratin-19 (CK-19), cytokeratin-20 (CK-20), mucin 1 (MUC-1), and gastrointestinal-associated antigen (GA733.2).

46. (Previously Presented) The method of claim 37, wherein the marker is GC-C.

47. (Previously Presented) The method of claim 37, wherein the disseminated cell marker is a cell marker for a metastatic colon cancer cell.